

## Assoc. Prof. ATİKE İNCE YARDIMCI

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Izmir Institute Of Technology, Mühendislik Ve Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği (Dr) (İngilizce), Turkey 2010 - 2018

Postgraduate, Izmir Institute Of Technology, Mühendislik Ve Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli) (İngilizce), Turkey 2007 - 2010

Undergraduate, Balıkesir University, Necatibey Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi Bölümü, Turkey 2002 - 2007

### Dissertations

Doctorate, Development of carbon nanotube embedded polyacrylonitrile/polypyrrole electrospun nanofibrous scaffolds, Izmir Institute Of Technology, Mühendislik Ve Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği (Dr) (İngilizce), 2018

Postgraduate, Growth and characterization of carbon nanotubes over Co-Mo/MgO catalysts, Izmir Institute Of Technology, Mühendislik Ve Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli) (İngilizce), 2010

### Research Areas

Polymeric Materials, Biomaterials, Nanomaterials

### Academic Titles / Tasks

Associate Professor, Usak University, REKTÖRLÜK, 2023 - Continues

Lecturer, Usak University, REKTÖRLÜK, 2019 - Continues

Research Assistant, Izmir Institute Of Technology, Fen Fakültesi, Fizik Bölümü, 2009 - 2018

### Courses

Girişimcilik 2, Undergraduate, 2020 - 2021

Biyofizik ve Biyomalzemeler, Undergraduate, 2020 - 2021

Malzemelerin Elektriksel, Manyetik ve Optik Özellikleri, Undergraduate, 2020 - 2021

## **Published journal articles indexed by SCI, SSCI, and AHCI**

- I. **Hybrid 3D printing and electrospinning technique for the production of air filter materials and the effect of different infill patterns on air permeability**  
İNCE YARDIMCI A., László T., YARDIMCI Ç.  
Bulletin of Materials Science, vol.47, no.1, 2024 (SCI-Expanded)
- II. **Polyacrylonitrile (PAN)/carbon nanotube (CNT) electrospun nanofibers: synthesis, characterization, their biocompatibility for L929 fibroblast cells and molecular docking studies**  
İNCE YARDIMCI A., Mutlu D., İSTİFLİ E. S., Arslan S., Mahaleh S. P. G., Yagmurcukardes N., Kara P., LİMAN R.  
International Journal of Polymeric Materials and Polymeric Biomaterials, vol.73, no.16, pp.1418-1428, 2024 (SCI-Expanded)
- III. **Electrospun polyacrylonitrile (PAN)/polypyrrole (PPy) nanofiber-coated quartz crystal microbalance for sensing volatile organic compounds**  
Yagmurcukardes N., İNCE YARDIMCI A., Yagmurcukardes M., Capan I., Erdogan M., Capan R., AÇIKBAŞ Y.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.34, no.27, 2023 (SCI-Expanded)
- IV. **Synthesis and characterization of single-walled carbon nanotube: Cyto-genotoxicity in Allium cepa root tips and molecular docking studies**  
İNCE YARDIMCI A., İSTİFLİ E. S., AÇIKBAŞ Y., LİMAN R., Yagmurcukardes N., Yilmaz S., Ciğerci İ. H.  
Microscopy Research and Technique, vol.85, no.9, pp.3193-3206, 2022 (SCI-Expanded)
- V. **Electrospun polyacrylonitrile (PAN) nanofiber: preparation, experimental characterization, organic vapor sensing ability and theoretical simulations of binding energies**  
İNCE YARDIMCI A., Yagmurcukardes N., Yagmurcukardes M., Capan I., Erdogan M., Capan R., TARHAN Ö., AÇIKBAŞ Y.  
Applied Physics A: Materials Science and Processing, vol.128, no.3, 2022 (SCI-Expanded)
- VI. **Antibacterial Activity of AgNO<sub>3</sub> Incorporated Polyacrylonitrile/Polyvinylidene Fluoride (PAN/PVDF) Electrospun Nanofibrous Membranes and Their Air Permeability Properties**  
İNCE YARDIMCI A., Durmus A., KAYHAN M., TARHAN Ö.  
Journal of Macromolecular Science, Part B: Physics, vol.61, no.6, pp.749-762, 2022 (SCI-Expanded)
- VII. **Polyacrylonitrile (PAN)/Polyvinyl Alcohol (PVA) Electrospun Nanofibrous Membranes Synthesis, Characterizations, and their Air Permeability Properties**  
İNCE YARDIMCI A., KAYHAN M., TARHAN Ö.  
Journal of Macromolecular Science, Part B: Physics, vol.61, no.10-11, pp.1426-1435, 2022 (SCI-Expanded)
- VIII. **Comparative Study of the Structural, Mechanical and Electrochemical Properties of Polyacrylonitrile (PAN)-Based Polypyrrole (PPy) and Polyvinylidene Fluoride (PVDF) Electrospun Nanofibers**  
İNCE YARDIMCI A.  
Journal of Macromolecular Science, Part B: Physics, vol.61, no.9, pp.1103-1115, 2022 (SCI-Expanded)
- IX. **Aptamer-based electrochemical biosensing strategy toward human non-small cell lung cancer using polyacrylonitrile/polypyrrole nanofibers**  
Kivrak E., Ince-Yardimci A., İlhan R., BALLAR KIRMIZIBAYRAK P., Yilmaz S., Kara P.  
Analytical and Bioanalytical Chemistry, vol.412, no.28, pp.7851-7860, 2020 (SCI-Expanded)
- X. **Effect of CNT incorporation on PAN/PPy nanofibers synthesized by electrospinning method**  
İNCE YARDIMCI A., Tanoğlu M., Yilmaz S., Selamet Y.  
Turkish Journal of Chemistry, vol.44, no.4, pp.1002-1015, 2020 (SCI-Expanded)
- XI. **Osteogenic differentiation of mesenchymal stem cells on random and aligned PAN/PPy nanofibrous scaffolds**  
Ince Yardimci A., Baskan O., Yilmaz S., Mese G., Ozcivici E., Selamet Y.  
Journal of Biomaterials Applications, vol.34, no.5, pp.640-650, 2019 (SCI-Expanded)

## **Articles Published in Other Journals**

- I. **POLYACRYLONITRILE (PAN) ELECTROSPUN NANOFIBERS COATED 3D PRINTED PLA MATERIALS WITH DIFFERENT INFILL PATTERNS AND THEIR TENSILE PROPERTIES**

ince yardimci a.

International Journal of 3D Printing Technologies and Digital Industry, vol.6, no.2, pp.307-313, 2022 (Peer-Reviewed Journal)

**II. Carbon Nanotube (CNT) Embedded Polyacrylonitrile (PAN) Electrospun Nanofibers Production and Characterizations**

İNCE YARDIMCI A., AÇIKBAŞ Y.

Afyon Kocatepe University International Journal of Engineering Technologies and Applied Sciences (AKU-IJETAS), vol.5, no.1, pp.5-12, 2022 (Peer-Reviewed Journal)

**III. Structural and Thermal Properties of Electrospun Whey Protein/PEO Nanofibers**

GÖZLER M., İNCE YARDIMCI A., TARHAN Ö.

Bulletin of Biotechnology, vol.2, no.2, pp.32-37, 2021 (Peer-Reviewed Journal)

**IV. ELECTROSPUN PROTEIN NANOFIBERS AND THEIR POTENTIAL FOOD APPLICATIONS**

İNCE YARDIMCI A., TARHAN Ö.

Muğla Journal of Science and Technology, no.2, pp.52-62, 2020 (Peer-Reviewed Journal)

**V. CNT Incorporated Polyacrylonitrile/Polypyrrole Nanofibers as Keratinocytes Scaffold**

İNCE YARDIMCI A., AYPEK H., ÖZTÜRK Ö., YILMAZ S., ÖZÇİVİCİ E., MEŞE G., SELAMET Y.

JOURNAL OF BIOMIMETICS, BIOMATERIALS AND BIOMEDICAL ENGINEERING, vol.41, pp.69-81, 2019 (Peer-Reviewed Journal)

## Books & Book Chapters

**I. Boron Nitride Nanotubes, Their Synthesis Methods and Biological Applications**

ULUIŞIK YILMAZ İ., İNCE YARDIMCI A.

in: International Research in Engineering Sciences, BİDECİ Alper, Editor, Platanus Yayınevi, pp.515-528, 2023

**II. Synthesis Methods of Carbon Nanotubes**

İNCE YARDIMCI A., Yağmurdokardeş N.

in: Handbook of Carbon Nanotubes, Jiji Abraham, Sabu Tomas, Nandakumar Kalarikkal, Editor, Springer, pp.25-56, 2022

**III. Regulatory principles on food nano-particles legislated by international organizations**

TARHAN Ö., İNCE YARDIMCI A.

in: Safety and Regulatory Issues of Nanoencapsulated Food Ingredients, Seid Mahdi Jafari, Editor, Academic Press\_Elsevier, pp.251-290, 2021

## Refereed Congress / Symposium Publications in Proceedings

**I. Carbon Nanotubes (CNTs), Their Synthesis Methods and Their Biological Applications**

İNCE YARDIMCI A., Yagmurdokardeş N.

3. Uluslararası Sağlık Bilimleri ve Biyoteknoloji Kongresi, Turkey, 03 October 2022

**II. Development of Graphene/PAN/PPy Nanofiber Based Electrochemical DNA Biosensor**

Yagmurdokardeş N., İNCE YARDIMCI A., Kıvrak E., TARHAN Ö., AÇIKBAŞ Y., KARA KADAYIFÇILAR P.

3. Uluslararası Sağlık Bilimleri ve Biyoteknoloji Kongresi, Bilecik, Turkey, 3 - 07 October 2022, pp.246-247

**III. Comparison of Air Permeability Properties of PAN/PVDF and PAN/PVA Electrospun Nanofibrous Membranes**

İNCE YARDIMCI A., KAYHAN M., TARHAN Ö.

5. Int. Conference on Material Science, Mechanical and Automotive Engineerings and Technology (IMSMATEC'22), Turkey, 02 September 2022

**IV. Morphological and Structural Properties of PAN/PVDF Electrospun Nanofibers**

İNCE YARDIMCI A., TARHAN Ö., KAYHAN M., Durmuş A.

4th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2021), Turkey, 24 -

26 November 2021

- V. **Composite Protein Nanofibers Obtained Through Electrospinning**  
GÖZLER M., İNCE YARDIMCI A., TARHAN Ö.  
4th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2021), Turkey, 24 - 26 November 2021
- VI. **Elektrolif Çekim Yöntemi ile Üretilen Filtre Malzemelerinin Virüslere Karşı Kullanımı**  
İNCE YARDIMCI A.  
2. Uluslararası Sağlık Bilimleri ve Biyoteknoloji Kongresi, Uşak, Turkey, 1 - 03 October 2020
- VII. **Food-based protein nanofibers produced by electrospinning**  
TARHAN Ö., İNCE YARDIMCI A.  
3rd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2020), Turkey, 19 - 20 March 2020
- VIII. **Nanofibers Usage as Tissue Engineering Scaffolds**  
İNCE YARDIMCI A.  
1. Uluslararası Sağlık Bilimleri ve Biyoteknoloji Kongresi, Uşak, Turkey, 14 - 16 October 2019
- IX. **Development of nanofiber functionalized aptasensor for electrochemical Detection of cancer cells**  
Kıvrak E., İNCE YARDIMCI A., İLHAN R., BALLAR KIRMIZIBAYRAK P., YILMAZ S., KARA KADAYIFÇILAR P., Kıvrak E.  
VIII. International Congress on Analytical Nanoscience and Nanotechnology, Barcelona, Spain, 3 - 05 July 2017
- X. **Random and aligned pan ppy electrospun nanofibrous scaffolds for osteogenic differentiation of bone marrow mesenchymal stem cells**  
İNCE YARDIMCI A., BASKAN Ö., MEŞE ÖZÇİVİCİ G., YILMAZ S., ÖZÇİVİCİ E., selamet y.  
Uluslararası Katılımlı 8. Ulusal Biyomekanik Kongresi, Ankara, Turkey, 19 - 23 October 2016
- XI. **CNT embedded PAN/PPy nanofiber actuators synthesized by electrospinning method**  
İNCE YARDIMCI A., SELAMET Y.  
EUROEAP2016, Kopenhag, Denmark, 14 - 15 June 2016
- XII. **PAN PPy Electrospun Nanofibers as Keratinocytes Scaffold**  
İNCE YARDIMCI A., HANDE A., MEŞE ÖZÇİVİCİ G., SELAMET Y.  
NanoTR11, Ankara, Turkey, 22 - 25 June 2015
- XIII. **Development of electrically conductive and anisotropic gel-coat systems using CNTs**  
İNCE YARDIMCI A., TANOĞLU M., SELAMET Y.  
Paintıstanbul, İstanbul, Turkey, 13 September 2012
- XIV. **Electrically Conductive Gel-Coat Polymer System with Aligned CNTs**  
İNCE YARDIMCI A., TANOĞLU M., SELAMET Y.  
NANOTR8, Turkey, 25 June 2012
- XV. **Karbon Nanotüplerin Jelkot Polimer Sistem İçerisinde Elektrik Alan Uygulamasıyla Yönlendirilmesi**  
İNCE YARDIMCI A., TANOĞLU M., SELAMET Y.  
Yoğun Madde Fiziği, İzmir Toplantısı, İzmir, Turkey, 06 April 2012
- XVI. **Controlled Catalyst Reduction with CO<sub>2</sub> for Efficient Growth of Carbon Nanotubes**  
Öğütlü D., İNCE YARDIMCI A., SELAMET Y.  
6th Nanoscience Nanotechnology Conference (NANOTR 6), İzmir, Turkey, 15 - 18 June 2010, pp.68
- XVII. **Carbon Nanotube Growth by Chemical Vapor Deposition on Co-Mo/MgO Catalyst**  
İNCE YARDIMCI A., YILMAZ S., SELAMET Y.  
NanoTR6, 15 - 18 June 2010
- XVIII. **Effect of Catalyst Pretreatment and Growth Conditions on CNT Synthesis on Co-Mo/MgO Catalyst**  
İNCE YARDIMCI A., YILMAZ S., SELAMET Y.  
3. Ulusal Kataliz Kongresi, Zonguldak, Turkey, 28 April - 01 May 2010
- XIX. **Effect of Pretreatment and Growth Conditions on CNT growth on Sorbitol Added Co-Mo/MgO**  
İNCE YARDIMCI A., YILMAZ S., SELAMET Y.  
ChemonTubes2010, 11 - 15 April 2010
- XX. **XPS Study of Catalyst Thin Films and Carbon Nanotubes Grown on these Films**  
İNCE YARDIMCI A., kır s., tari s., SELAMET Y.

NanoMats2009, İstanbul, Turkey, 10 - 13 August 2009

**XXI. Growth and Characterization of Carbon Nanotubes by Chemical Vapor Deposition on MgO and Zeolite Supports**

İNCE YARDIMCI A., YILMAZ S., SELAMET Y.

NANOTR5, Turkey, 8 - 12 June 2009

## Supported Projects

İNCE YARDIMCI A., TUBITAK Project, 2209-A Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı- AgNO<sub>3</sub> Katkılanmış Antibakteriyel PAN/PVA Nanolifli Membranların Sentezi ve Hava Geçirgenliği Özelliklerinin Belirlenmesi, 2022 - Continues

Yalçın F., İnce Yardımcı A., Şaştım Ö., AB IPA Project, Gençler Çalışıyor Uşak Gelişiyor (Youth are working Uşak is Developing), 2023 - 2024

İNCE YARDIMCI A., KAYHAN M., TARHAN Ö., Project Supported by Higher Education Institutions, Filtre Uygulamaları için Elektrolif Çekim Yöntemi ile Antibakteriyel Poliakrilonitril (PAN)/ Polivinilidin Florür (PVDF) Nanolif Üretimi, 2021 - 2022

İNCE YARDIMCI A., Sanayi ve Teknoloji Bakanlığı- Teknogirişim Sermaye Desteği Yapay Kaslarda Kullanılmak Üzere Elektrosinning Yöntemi ile Karbon Nanotüp İlave Edilmiş Elektroaktif İletken Polimer Nanofiberler Elde Edilmesi, 2015 - 2016

## Metrics

Publication: 40

Citation (Scopus): 83

H-Index (Scopus): 6

## Non Academic Experience

Carbon Nanoteknoloji